Excess Emissions, January–February 2005 (Major Events Only)

Date	Approximate Time	Hours of Excess Emissions	Event
January 10	Noon–7:30 pm	7.5 hours	Ring push; shutdown
January 16	8 pm–11 pm	3 hours	Ring push; shutdown
January 17	1 pm–8:30 pm	7.5 hours	Ring push; shutdown
January 30–31	2 pm–3 am; 7:30 am–1:30 pm	19 hours	Malfunction; shutdown
February 5–6		1hour	Malfunction
February 10		1 hour	Ring push; malfunction
February 11–12	9 am Feb 11–1 pm Feb 12	28 hours	Ring push; shutdown
February 12	Clinker cooler: 4:30–5:30	1 hour	Malfunction
February 15	9:30 am–1:30 pm	4 hours	Malfunction; shutdown
February 25–26	7 am–11 pm Feb 25; 9 am–11:30 am Feb 26	18 hours	Ring push; shutdown

TOTAL = 90 hours (6.4 %) approximately

EXHIBIT 5
DATE 2-12-07
HB 408

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: January 20, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): X

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred:

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
1/10/2005	11:42:00	11:48:00	1	24.4	24.4
1/10/2005	11:54:00	12:00:00	1	22.0	22.0
1/10/2005	12:30:00	12:36:00	1	26.7	26.7
1/10/2005	12:54:00	13:00:00	1	23.3	23.3
1/10/2005	14:00:00	14:18:00	3	40.7	66.2
1/10/2005	14:30:00	14:48:00	3	22.7	23.8
1/10/2005	14:54:00	15:00:00	1	22.1	22.1
1/10/2005	15:24:00	15:30:00	1	21.9	21.9
1/10/2005	15:36:00	16:06:00	5	27.2	42.0
1/10/2005	16:12:00	16:36:00	4	31.0	37.5
1/10/2005	16:42:00	19:30:00	28	40.8	59.2

Date and time of DEQ notification (2): 01/11/05 @ 1:20 am

Contact: Fax to 406.444.1499

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data

collected by voluntary COMS is included in the table above.

Specific Cause of Malfunction (5b) (2a): The kiln underwent a shut-down and start-up process in order to remove a ri

Verify malfunction has been corrected (5a): Oxygen and combustibles concentrations returned to normal ranges. The ESP resumed functioning normally and opacity readings returned to acceptable levels.

Corrective Action Taken (2d): The ring was removed. Additionally, the raw material mix design was modified in an effort to reduce ringing activity.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are ~~true,~~ accurate, and complete.

Signature

1.24.2005
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: January 20, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): N/A

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred:

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
1/16/2005	17:54:00	18:00:00	1	34.6	34.6
1/16/2005	20:06:00	20:18:00	2	41.1	42.0
1/16/2005	20:24:00	20:30:00	1	63.0	63.0
1/16/2005	22:06:00	22:18:00	2	36.0	51.8
1/16/2005	22:54:00	23:00:00	1	31.0	31.0

Date and time of DEQ notification (2): 01/11/05 @ 1:20 am

Contact: Fax to 406.444.1499

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above.

Specific Cause of Malfunction (5b) (2a): The kiln experienced a ring push, which caused an imbalance in the oxygen and combustibles concentrations in the exhaust stream.

Verify malfunction has been corrected (5a): Oxygen and combustibles concentrations returned to normal ranges. The

ESP resumed functioning normally and opacity readings returned to acceptable levels.

Corrective Action Taken (2d): The push of material moved through the kiln. Kiln revolutions were decreased, fuel fe was decreased, oxygen levels in the back end of the kiln were increased and the ESP resumed functioning properly.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

1. 24. 2005
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: January 24, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): X

Shutdown (repair/maintenance): X

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred:

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION				Measured OPACITY (%)	
DATE	START TIME	END TIME	#-6 MIN	AVG.	MAX.
1/17/2005	13:00:00	13:12:00	2	42.4	43.9
1/17/2005	13:36:00	14:06:00	5	43.1	50.7
1/17/2005	14:30:00	14:36:00	1	26.5	26.5
1/17/2005	14:42:00	14:48:00	1	22.5	22.5
1/17/2005	14:54:00	15:00:00	1	21.2	21.2
1/17/2005	15:12:00	15:18:00	1	21.5	21.5
1/17/2005	15:54:00	16:00:00	1	25.9	25.9
1/17/2005	16:06:00	16:12:00	1	22.8	22.8
1/17/2005	16:36:00	16:42:00	1	22.0	22.0
1/17/2005	17:12:00	20:24:00	32	50.6	72.8
1/17/2005	20:30:00	20:36:00	1	22.0	22.0

Date and time of DEQ notification (2): 01/18/05 @ 4:37 am

Contact: Fax to 406.444.1499

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data

collected by voluntary COMS is included in the table above.

Specific Cause of Malfunction (5b) (2a): The kiln was shut down and started back up for ring removal.

Verify malfunction has been corrected (5a): Oxygen and combustibles concentrations returned to normal ranges. The ESP resumed functioning normally and opacity readings returned to acceptable levels.

Corrective Action Taken (2d): The ring was removed and the kiln was started back up. Oxygen levels in the back end of the kiln were increased and the ESP resumed functioning properly.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

1-24-2005
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

Post-it® Fax Note 7671	Date 2/24/05	# of pages ▶ 7
To ANN HEDGES	From KAREN WILSON	
Co./Dept. MEIC	Co. MT DEQ	
Phone #	Phone # 258-4907	
Fax # 443-2507	Fax #	

JANUARY UPSET RPTS - Page 1 of 7

DEPARTMENT OF ENVI
Permitting and Co
Air Resources Man
Facility Upset

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 1, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): X

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred:

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
1/30/2005	13:42:00	0:00:00	103	54.9	72.7
1/31/2005	0:00:00	2:42:00	27	34.8	49.7
1/31/2005	2:48:00	3:06:00	3	28.2	38.9
1/31/2005	6:42:00	6:48:00	1	25.8	25.8
1/31/2005	7:24:00	7:30:00	1	28.0	28.0
1/31/2005	7:42:00	8:00:00	3	37.6	49.0
1/31/2005	8:06:00	8:12:00	1	21.7	21.7
1/31/2005	8:30:00	8:36:00	1	24.1	24.1
1/31/2005	8:48:00	9:00:00	2	20.4	20.7
1/31/2005	9:36:00	9:42:00	1	22.7	22.7
1/31/2005	10:06:00	10:24:00	3	25.4	28.7
1/31/2005	12:00:00	13:06:00	11	41.4	64.7
1/31/2005	13:12:00	13:30:00	3	32.1	38.3

Date and time of DEQ notification (2): 01/31/05 @ 5:56 am

Contact: Fax to 406.444.1499 and 406.258.4781

Emission Point (2a) : Kiln stack (ESP)

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

2.1.05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 8, 2005

Select the most appropriate categories:

Start-up (Production): X

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): N/A

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred:

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
2/5/2005	11:36:00	11:42:00	1	21.5	21.5
2/5/2005	12:00:00	12:06:00	1	31.0	31.0
2/5/2005	12:24:00	12:30:00	1	22.5	22.5
2/5/2005	12:48:00	12:54:00	1	24.8	24.8
2/6/2005	6:18:00	6:30:00	2	29.7	33.5
2/6/2005	6:42:00	6:48:00	1	24.2	24.2

Date and time of DEQ notification (2): 02/07/05 @ 6:40 am and 02/06/05 @ 11:17 am Contact: Fax to 406.444.1499

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above.

Specific Cause of Malfunction (5b) (2a): During startup conditions the kiln experiences an imbalance in the oxygen and combustibles concentrations in the exhaust stream.

Verify malfunction has been corrected (5a): Startup procedures were followed. Oxygen and combustibles concentration resumed normal ranges. The ESP resumed functioning normally and opacity readings returned to acceptable levels.

Corrective Action Taken (2d): Startup procedures were followed. Oxygen and combustibles concentrations resumed normal ranges. The ESP resumed functioning normally and opacity readings returned to acceptable levels.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

2.8.05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave. (406) 444-3490
P.O. Box 200901 Fax (406) 444-1499
Helena, MT 59620-0901

MT DEQ (406) 258-4907
301 West Alder Street Fax (406) 258-4781
Missoula, MT 59802

RECEIVED
FEB 18 2005
MT Dept. Environmental Quality
Permitting & Compliance Divison
Air Resources Management Bureau

Report Date: February 16, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Shutdown (Production): N/A

Start-up (repair/maintenance): N/A

Shutdown (repair/maintenance): N/A

Exceedance:

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred: February 10, 2005
Begin (2c): 3:10 PM End: 3:45 PM Total Time: 35 min.
Begin (2c): 9:20 PM End: 9:40 PM Total Time: 20 min.

Date and time of DEQ notification (2): 02/11/05 (time unknown) Contact: Faxed to 406.444.1499 and 406.258.4781

Emission Point (2a) : Clinker cooler

Monitor/Method 9 Opacity Readings (2b): N/A. A CEM is not required on the clinker cooler. Method 9 was not taken.

Specific Cause of Malfunction (5b) (2a): Two different "pushes" occurred in the kiln. A "push" is when coating breaks off the wall of the kiln and a rush of hot material enters the clinker cooler. The high temperatures of the air in the clinker cooler exceeded safe operating conditions of the clinker cooler dust collector. The clinker cooler vented to atmosphere while temperatures were brought down to an acceptable range.

Verify malfunction has been corrected (5a): After the initial rush of hot material, operating temperatures within the clinker cooler returned to acceptable levels. Exhaust gases resumed being routed through the clinker cooler dust collector.

Corrective Action Taken (2d): Corrective actions to reduce temperatures in the clinker cooler include air quenching and water addition. Air quenching involves partially opening a damper to allow ambient dilution air to enter the clinker cooler. The flow of ambient air dilutes and cools the clinker cooler exhaust stream while the draft created at the back of the kiln prohibits exhaust from leaving through the bypass. If air quenching does not adequately cool the clinker cooler exhaust gases, Trident currently has four levels of water sprays to cool the clinker cooler

exhaust gas. As the temperature in the dust collector rises, water sprays are automatically initiated at various set points. Currently, the first spray is triggered when temperatures reach approximately 250°F. The second and third water sprays are triggered at approximately 260°F and 270°F, respectively. At approximately 330°F the fourth, and most powerful water option is triggered. If clinker cooler dust collector temperatures continue to rise and reach approximately 360°F, two dampers are automatically triggered into action. One damper closes off the entrance to the dust collector and one damper opens an outside vent. At temperatures at or above 360°F, manual switches for those dampers are not functional. The dampers will stay in "bypass positions" until safe operating conditions (i.e., temperatures below 360°F) resume for more than 10 seconds and the Bypass Reset Screen Select Button is 'clicked'.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. Upsets, in addition to having potential for causing excess emissions, have potential for adversely impacting production rates and plant economics. As a result, Holcim has a strong interest in reducing the frequency and duration of upset conditions.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

JR Owen — 2/17/05

Signature — Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 16, 2005

Select the most appropriate categories:

Start-up (Production): X

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): X

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time of DEQ notification (2): 02/12/05 @ 7:35 am, 02/11/05 (time unknown), 02/12/05 @ 6:18 PM
Contact: Fax to 406.444.1499 and 406.258.4781

Date and time event occurred: ***Please note**: that the following table contains additional time not included in the initial reports.

Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
2/11/2005	8:42:00	9:06:00	4	54.2	73.5
2/11/2005	9:18:00	9:42:00	4	31.6	41.0
2/11/2005	15:42:00	15:48:00	1	43.1	43.1
2/11/2005	21:18:00	21:30:00	2	20.7	20.7
2/11/2005	21:36:00	21:42:00	1	24.1	24.1
2/11/2005	21:48:00	21:54:00	1	26.8	26.8
2/11/2005	22:00:00	22:06:00	1	26.8	26.8
2/11/2005	22:12:00	22:36:00	4	34.9	36.1
2/11/2005	22:48:00	23:24:00	6	30.3	39.7
2/11/2005	23:30:00	23:36:00	1	29.4	29.4
2/11/2005	23:42:00	0:00:00	3	25.0	26.4
2/12/2005	0:00:00	0:06:00	1	34.1	34.1
2/12/2005	0:12:00	0:36:00	4	28.2	36.8
2/12/2005	0:42:00	2:06:00	14	37.9	43.6

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
2/12/2005	2:36:00	2:42:00	1	21.0	21.0
2/12/2005	3:30:00	3:42:00	2	29.2	31.0
2/12/2005	3:48:00	3:54:00	1	26.6	26.6
2/12/2005	4:30:00	4:36:00	1	25.0	25.0
2/12/2005	4:48:00	4:54:00	1	24.4	24.4
2/12/2005	6:12:00	6:18:00	1	23.6	23.6
2/12/2005	6:48:00	13:12:00	64	50.0	74.4
2/12/2005	0:00:00	0:06:00	1	34.1	34.1
2/12/2005	0:12:00	0:36:00	4	28.2	36.8
2/12/2005	0:42:00	2:06:00	14	37.9	43.6
2/12/2005	2:36:00	2:42:00	1	21.0	21.0
2/12/2005	3:30:00	3:42:00	2	29.2	31.0
2/12/2005	3:48:00	3:54:00	1	26.6	26.6
2/12/2005	4:30:00	4:36:00	1	25.0	25.0
2/12/2005	4:48:00	4:54:00	1	24.4	24.4
2/12/2005	6:12:00	6:18:00	1	23.6	23.6
2/12/2005	6:48:00	13:12:00	64	50.0	74.4

Emission Point (2a) : Kiln stack (ESP)

Date and time event occurred:
Begin (2c): February 11, 2005 5:28 PM End: February 11, 2005 5:43 PM Total Time: 15 min.
Begin (2c): February 12, 2005 4:34 PM End: February 12, 2005 5:25 PM Total Time: 51 min.
Emission Point (2a) : Clinker cooler

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above. A COMS is not required on the clinker cooler. A Method 9 Reading was not taken.

Specific Cause of Malfunction (5b) (2a): During the morning of February 11, 2005, the breaker to the ID fan control power was inadvertently tripped off. The ID fan powering off, set into motion a series of pre-programmed automatic events designed to limit safety risks—fuel feed went off-line, the ESP went down, and the kiln went-into shutdown. Start-up operations began, but were complicated by pre-existing ring conditions in the kiln. A second ring formed in the kiln and material trapped between the two rings super-heated to the point of becoming liquid, which further complicated start-up operations. As the liquid clinker moved through the kiln and into the clinker cooler, the high temperatures of the air in the clinker cooler exceeded safe operating conditions. The clinker cooler vented to atmosphere while temperatures were brought down to an acceptable range.

Verify malfunction has been corrected (5a): In regard to the kiln, startup was completed. Stable conditions returned and the ESP resumed functioning normally. Measured opacity returned to levels below 20%. In regard to the clinker cooler, after corrective measures, operating temperatures within the clinker cooler returned to acceptable levels. Exhaust gases resumed being routed through the clinker cooler dust collector.

Corrective Action Taken (2d): With regard to the ESP upset, the control room operator received an audible alarm that the ID fan went down. The cause was identified and the ID fan control power breaker was returned to operational position. Startup procedures were followed to return kiln to stable operations.

Corrective actions to reduce temperatures in the clinker cooler include air quenching and water addition. Air quenching involves partially opening a damper to allow ambient dilution air to enter the clinker cooler. The flow of ambient air dilutes and cools the clinker cooler exhaust stream while the draft created at the back of the kiln prohibits exhaust from leaving through the bypass. If air quenching does not adequately cool the clinker cooler exhaust gases, Trident currently has four levels of water sprays to cool the clinker cooler exhaust gas. As the temperature in the dust collector rises, water sprays are automatically initiated at various set points. Currently, the first spray is triggered when temperatures reach approximately 250°F. The second and third water sprays are triggered at approximately 260°F and 270°F, respectively. At approximately 330°F the fourth, and most powerful water option is triggered. If clinker cooler dust collector temperatures continue to rise and reach approximately 360°F, two dampers are automatically triggered into action. One damper closes off the entrance to the dust collector and one damper opens an outside vent. At temperatures at or above 360°F, manual switches for those dampers are not functional. The dampers will stay in "bypass positions" until safe operating conditions (i.e., temperatures below 360°F) resume for more than 10 seconds and the Bypass Reset Screen Select Button is 'clicked'.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. This situation has been examined and discussed to prevent similar future occurrences.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

JR Owen
Signature

2/17/05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4780
Fax (406) 258-4781

Report Date: February 21, 2005

Select the most appropriate categories:

Start-up (Production): X

Start-up (repair/maintenance): N/A

Exceedance:

Shutdown (Production): X

Shutdown (repair/maintenance): N/A

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant Person Reporting: Heidy Bruner Environmental Manager

Date and time of DEQ notification (2): 02/15/05 @ 7:42 PM Contact: Fax to 406.444.1499

Date and time event occurred:
Begin (2c): Please see table below. End: Please see table below. Total Time: Please see table below.

EXCURSION				Measured OPACITY (%)	
DATE	START TIME	END TIME	#-6 MIN	AVG.	MAX.
2/15/2005	9:24:00	10:42:00	13	28.6	40.5
2/15/2005	11:06:00	11:12:00	1	23.0	23.0
2/15/2005	11:36:00	11:42:00	1	34.2	34.2
2/15/2005	12:24:00	12:36:00	2	22.9	23.0
2/15/2005	12:48:00	13:30:00	7	49.7	70.0

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above. A COMS is not required on the clinker cooler. A Method 9 Reading was not taken.

Specific Cause of Malfunction (5b) (2a): The kiln was taken down to conduct maintenance in the clinker cooler.

Verify malfunction has been corrected (5a): Maintenance activities were completed. Startup was completed. Stable conditions returned and the ESP resumed functioning normally. Measured opacity returned to levels below 20

Corrective Action Taken (2d): Shutdown and startup procedures were followed to return kiln to stable operations.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. This situation has been examined and discussed to prevent similar future occurrences.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

2-21-05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 25, 2005

Select the most appropriate categories:

Start-up (Production): N/A

Shutdown (Production): N/A

Start-up (repair/maintenance): N/A

Shutdown (repair/maintenance): N/A

Exceedance:

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred: February 21, 2005
Begin (2c): 10:14 PM End: 10:22 PM Total Time: 8 min.
Begin (2c): 11:13 PM End: 11:29 PM Total Time: 16 min.

Date and time of DEQ notification (2): 02/22/05 9:37 AM

Contact: Faxed to 406.444.1499 and 406.258.4781

Emission Point (2a) : Clinker cooler

Monitor/Method 9 Opacity Readings (2b): N/A. A CEM is not required on the clinker cooler. Method 9 was not taken.

Specific Cause of Malfunction (5b) (2a): Two different "pushes" occurred in the kiln. A "push" is when coating breaks off the wall of the kiln and a rush of hot material enters the clinker cooler. The high temperatures of the air in the clinker cooler exceeded safe operating conditions of the clinker cooler dust collector. The clinker cooler vented to atmosphere while temperatures were brought down to an acceptable range.

Verify malfunction has been corrected (5a): After rush of hot material, operating temperatures within the clinker cooler returned to acceptable levels. Exhaust gases resumed being routed through the clinker cooler dust collector.

Corrective Action Taken (2d): Corrective actions to reduce temperatures in the clinker cooler include air quenching and water addition. Air quenching involves partially opening a damper to allow ambient dilution air to enter the clinker cooler. The flow of ambient air dilutes and cools the clinker cooler exhaust stream while the draft created at the back of the kiln prohibits exhaust from leaving through the bypass. If air quenching does not adequately cool the clinker cooler exhaust gases, Trident currently has four levels of water sprays to cool the clinker cooler exhaust gas. As the temperature in the dust collector rises, water sprays are automatically initiated at various set points.

Currently, the first spray is triggered when temperatures reach approximately 250°F. The second and third water sprays are triggered at approximately 260°F and 270°F, respectively. At approximately 330°F the fourth, and most powerful water option is triggered. If clinker cooler dust collector temperatures continue to rise and reach approximately 360°F, two dampers are automatically triggered into action. One damper closes off the entrance to the dust collector and one damper opens an outside vent. At temperatures at or above 360°F, manual switches for those dampers are not functional. The dampers will stay in "bypass positions" until safe operating conditions (i.e., temperatures below 360°F) resume for more than 10 seconds and the Bypass Reset Screen Select Button is 'clicked'.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. Upsets, in addition to having potential for causing excess emissions, have potential for adversely impacting production rates and plant economics. As a result, Holcim has a strong interest in reducing the frequency and duration of upset conditions.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature _____ Date 2.25.05

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 25, 2005

Select the most appropriate categories:

Start-up (Production): X
Shutdown (Production): X
Start-up (repair/maintenance): N/A
Shutdown (repair/maintenance): N/A
Exceedance:
Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant
Person Reporting: Heidy Bruner Environmental Manager

Date and time of DEQ notification (2): 02/23/05 6:42 PM & 6:46 PM
Contact: Faxed to 406.444.1499 and 406.258.4781

Date and time event occurred:
Begin (2c): Please see table below.
End: Please see table below.
Total Time: Please see table below.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
2/23/2005	8:48:00	8:54:00	1	39.8	39.8
2/23/2005	9:24:00	9:30:00	1	37.1	37.1
2/23/2005	10:06:00	10:12:00	1	31.7	31.7

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above. A COMS is not required on the clinker cooler. A Method 9 Reading was not taken.

Specific Cause of Malfunction (5b) (2a): Oxygen and combustibles concentrations were outside safe levels for operation of the electrostatic precipitator.

Verify malfunction has been corrected (5a): Work was conducted on the coal mill feeders. The feeders were restarted. Stable conditions returned and the ESP resumed functioning normally. Measured opacity returned to levels below 20%.

Corrective Action Taken (2d): Work was conducted on the coal mill feeders. The feeders were restarted. Stable conditions returned and the ESP resumed functioning normally. Measured opacity returned to levels below 20%.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. This situation has been examined and discussed to prevent similar future occurrences.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

2-25-05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: February 25, 2005

Select the most appropriate categories:

Start-up (Production): N/A
Shutdown (Production): N/A
Start-up (repair/maintenance): N/A
Shutdown (repair/maintenance): N/A
Exceedance:
Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions
in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant
Person Reporting: Heidy Bruner Environmental Manager

Date and time event occurred: February 23, 2005
Begin (2c): 12:33 AM
End: 12:51 AM
Total Time: 18 min.

Date and time of DEQ notification (2): 02/23/05 3:48 AM & 3:51 AM
Contact: Faxed to 406.444.1499 and 406.258.4781

Begin (2c): 2:59 PM
End: 3:19 PM
Total Time: 20 min.

Date and time of DEQ notification (2): 02/23/05 6:42 PM & 6:46 PM
Contact: Faxed to 406.444.1499 and 406.258.4781

Emission Point (2a) : Clinker cooler

Monitor/Method 9 Opacity Readings (2b): N/A. A CEM is not required on the clinker cooler. Method 9 was not taken.

Specific Cause of Malfunction (5b) (2a): Ring pushes occurred in the kiln. A "push" is when coating breaks off the wall of the kiln and a rush of hot material enters the clinker cooler. The high temperatures of the air in the clinker cooler exceeded safe operating conditions of the clinker cooler dust collector. The clinker cooler vented to atmosphere while temperatures were brought down to an acceptable range.

Verify malfunction has been corrected (5a): After the rush of hot material, operating temperatures within the clinker cooler returned to acceptable levels. Exhaust gases resumed being routed through the clinker cooler dust collector.

Corrective Action Taken (2d): Corrective actions to reduce temperatures in the clinker cooler include air quenching

Corrective Action Taken (2d): Corrective actions to reduce temperatures in the clinker cooler include air quenching and water addition. Air quenching involves partially opening a damper to allow ambient dilution air to enter the clinker cooler. The flow of ambient air dilutes and cools the clinker cooler exhaust stream while the draft created at the back of the kiln prohibits exhaust from leaving through the bypass. If air quenching does not adequately cool the clinker cooler exhaust gases, Trident currently has four levels of water sprays to cool the clinker cooler exhaust gas. As the temperature in the dust collector rises, water sprays are automatically initiated at various set points. Currently, the first spray is triggered when temperatures reach approximately 250°F. The second and third water sprays are triggered at approximately 260°F and 270°F, respectively. At approximately 330°F the fourth, and most powerful water option is triggered. If clinker cooler dust collector temperatures continue to rise and reach approximately 360°F, two dampers are automatically triggered into action. One damper closes off the entrance to the dust collector and one damper opens an outside vent. At temperatures at or above 360°F, manual switches for those dampers are not functional. The dampers will stay in "bypass positions" until safe operating conditions (i.e., temperatures below 360°F) resume for more than 10 seconds and the Bypass Reset Screen Select Button is 'clicked'.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses. Upsets, in addition to having potential for causing excess emissions, have potential for adversely impacting production rates and plant economics. As a result, Holcim has a strong interest in reducing the frequency and duration of upset conditions.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature

2-25-05
Date

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

DEPARTMENT OF ENVIRONMENTAL QUALITY

Permitting and Compliance Division
Air Resources Management Bureau
Facility Upset Report

1520 E. 6th Ave.
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-3490
Fax (406) 444-1499

MT DEQ
301 West Alder Street
Missoula, MT 59802
(406) 258-4907
Fax (406) 258-4781

Report Date: March 1, 2005

Select the most appropriate categories:

Start-up (Production): X

Shutdown (Production): X

Start-up (repair/maintenance): N/A

Shutdown (repair/maintenance): N/A

Exceedance:

Malfunction: X

If reporting under ARM 17.8.110 (Malfunction Rule), please complete this entire form. ***(Additional information may be needed).***

DEQ must be notified promptly by telephone/fax, whenever a malfunction occurs that is expected to create excess emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours. Within 1 week after a malfunction has been corrected, the owner or operator must submit a written report to the department that includes this primary information. See ARM 17.8.110 for specific instructions. The malfunction rule section is referenced in parentheses.

Company: Holcim (US) Inc. – Trident Plant

Person Reporting: Heidy Bruner Environmental Manager

Date and time of DEQ notification (2):

02/25/05 Upsets: 02/26/05 at 5:23 AM to 406.444.1499 and 02/28/05 at 8:44 AM to 406.258.4781
02/26/05 Upsets: 02/26/05 at 6:51 PM to 406.444.1499 and 02/26/05 at 6:56 PM to 406.258.4781

Date and time event occurred:
Begin (2c): Please see table below.

End: Please see table below.

Total Time: Please see table below.

***Please note:** that the times specified below are slightly different from the initial report and are the correct upset times.

EXCURSION			#-6	Measured OPACITY (%)	
DATE	START TIME	END TIME	MIN	AVG.	MAX.
2/25/2005	6:30:00	6:42:00	2	39.8	54.1
2/25/2005	7:12:00	22:00:00	148	62.1	75.4
2/25/2005	22:30:00	22:36:00	1	21.7	21.7
2/25/2005	22:48:00	22:54:00	1	23.8	23.8
2/26/2005	9:00:00	9:30:00	5	56.3	71.6
2/26/2005	10:00:00	11:24:00	14	37.7	69.9

Emission Point (2a) : Kiln stack (ESP)

Monitor/Method 9 Opacity Readings (2b): A COMS is not required on the kiln stack. A Method 9 was not taken. Data collected by voluntary COMS is included in the table above. A COMS is not required on the clinker cooler. A Method 9 Reading was not taken.

Specific Cause of Malfunction (5b) (2a): A large ring had been building in the kiln causing kiln instability and ring pushes. The kiln had to be brought down to remove the ring. The kiln was down for approximately 30 hours for ring removal. The kiln was brought back on-line. Some product material remained in the kiln. During start-up operations that material is stirred up and opacity exceedances can occur. Startup operations were complicated when the flame on the gas torch went out. Raw natural gas was feed in the kiln. For safety purposes, the kiln had to be purged of the gas in order for the ESP to operate. ESP upsets occurred because oxygen and combustibles concentrations were outside safe levels for operation of the electrostatic precipitator.

Verify malfunction has been corrected (5a): Shut down procedures were followed. The ring was removed. Startup procedures were followed. Oxygen and combustible levels returned to within normal, safe ranges and the ESP resumed functioning normally. Measured opacity returned to levels below 20%.

Corrective Action Taken (2d): Shut down procedures were followed. The ring was removed. Startup procedures were followed. Oxygen and combustible levels returned to within normal, safe ranges and the ESP resumed functioning normally. Measured opacity returned to levels below 20%.

Measures to prevent recurrence (5c): Holcim is continually endeavoring to reduce upset/malfunction conditions. Data from this event will be included in future analyses.

Verify the event was not caused by poor maintenance, careless operation, poor design, or any other preventable upset condition or breakdown (5d): Holcim (US) Inc. – Trident Plant believes that the equipment malfunction could not have been prevented and was not a result of poor maintenance, careless operation, or poor design.

Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature _____ Date 3-1-05

Holcim (US) Inc – Trident Plant
Plant Manager or Plant Manager Designee

Inspector Comments: _____

Holcim Trident Laboratory Analytical Report

Sample Date: 5/12/05

Description	ClientSampID	pH	Chloride	Arsenic - RL=5	Beryllium - RL=5	Cadmium - RL=1	Cobalt - RL=5	Chromium - RL=5	Iron - RL=10	Manganese - RL=5	Lead - RL=5	Antimony - RL=5	Mercury - RL=1	Nickel - RL=5	Phosphorus - RL=10	Selenium - RL=5	Zinc - RL=5
ASARCO Slag	HASP01-B1	9.5	2.89	114	<5	2.8	218	106	271000	9340	511	41.4	<1	18.3	613	8.8	23300
ASARCO Slag	HASP02-C4	9.6	1.47	148	<5	1.1	231	107	271000	9320	75.2	52.2	<1	18.4	556	6.4	18400
ASARCO Slag	HASP03-E7	9.4	1.68	130	<5	1.1	201	101	252000	8940	116	48.3	<1	19.7	568	5.9	18000
ASARCO Slag	HASP04-A9	9.7	1.44	160	<5	<1	240	113	284000	9510	83.1	72.0	<1	20.1	586	6.0	19600
ASARCO Slag	HASP05-F9	9.4	1.27	145	<5	<1	206	113	280000	9510	68.6	55.0	<1	19.3	620	9.5	19000
*ASARCO Slag	HASP06-A0	9.3	1.89	150	<5	1.1	224	94.6	265000	9370	84	41.9	<1	17.9	561	5.7	18300
Mill Scale	HNUCOR01	10.3	35.9	32.0	<5	<1	45.6	784	515000	6160	13.4	10	<1	473	119	<5	184
*Mill Scale	HNUCOR02	9.7	37.5	31.3	<5	<1	45.4	837	532000	6210	15.5	9.8	<1	568	93	<5	150
Mill Scale	HNUCOR03	10.3	36.8	31.7	<5	<1	45.2	879	528000	6340	13.5	9.8	<1	575	118	<5	100
Ferrous Granules	HTECK01	9.0	2.09	374	<5	1.4	254	370	188000	6120	364	364	<1	62	519	5.7	17000
Ferrous Granules	HTECK02	8.9	1.29	486	<5	2.2	301	443	266000	7410	464	436	<1	79	581	5.7	18400
Ferrous Granules	HTECK03	9.1	1.76	670	<5	2.7	250	446	267000	7690	392	392	<1	51.2	608	6.0	18300
*Ferrous Granules	HTECK04	9.0	3.02	505	<5	3.6	262	451	274000	8030	879	300	<1	67.2	601	6.3	20000
Coke	HCONOCO01	7.9	24.3	<5	<5	<1	<5	<5	561	9.4	<5	<5	<1	107	<10	<5	6.4
Coke	HCONOCO02	7.8	16.6	<5	<5	<1	<5	<5	328	7.3	<5	<5	<1	105	<10	<5	9.3
*Coke	HCONOCO03	7.5	15.9	<5	<5	<1	<5	<5	152	<5	<5	<5	<1	108	<10	<5	<5
Coal	HBULLMO01	7.7	7.76	<5	<5	<1	<5	<5	544	16.7	<5	<5	<1	<5	<10	<5	6.5
Coal	HBULLMO02	7.6	7.51	<5	<5	<1	<5	8.4	1760	25.0	<5	<5	<1	<5	11	<5	11.9
*Coal	HBULLMO03	7.7	7.00	<5	<5	<1	<5	12.0	1400	25.4	<5	<5	<1	<5	13	<5	17.4
Coal	HSCREEK01	7.2	6.78	<5	<5	<1	<5	<5	1440	28.2	<5	<5	<1	<5	33	<5	15.1
Coal	HSCREEK02	7.7	9.58	<5	<5	<1	<5	<5	1340	16.8	5.2	<5	<1	<5	16	<5	9.2
*Coal	HSCREEK03	6.9	8.51	<5	<5	<1	<5	<5	2000	22.2	<5	<5	<1	<5	40	<5	11.4
Iron Source	HWSSMO01	8.6	13.6	24.8	<5	<1	<5	20.3	150000	214	382	<5	<1	<5	222	<5	220

*=QA/QC Sample

All units are mg/kg except for pH which is s.u. RL=Analyte reporting limit.

Holcim Trident Laboratory Analytical Report

Sample Date: 5/12/05

				Total Metals													
Description	**ClientSampID**	**pH**	**Chloride**	***Arsenic - RL=5***	***Beryllium - RL=5***	***Cadmium - RL=1***	***Cobalt - RL=5***	***Chromium - RL=5***	***Iron - RL=10***	***Manganese - RL=5***	***Lead - RL=5***	***Antimony - RL=5***	***Mercury - RL=1***	***Nickel - RL=5***	***Phosphorus - RL=10***	***Selenium - RL=5***	***Zinc - RL=5***
ASARCO Slag	HASP01-B1	9.5	2.89	114	<5	2.8	218	106	271000	9340	511	41.4	<1	18.3	613	8.8	23300
ASARCO Slag	HASP02-C4	9.6	1.47	148	<5	1.1	231	107	271000	9320	75.2	52.2	<1	18.4	556	6.4	18400
ASARCO Slag	HASP03-E7	9.4	1.68	130	<5	1.1	201	101	252000	8940	116	48.3	<1	19.7	568	5.9	18000
ASARCO Slag	HASP04-A9	9.7	1.44	160	<5	<1	240	113	284000	9510	83.1	72.0	<1	20.1	586	6.0	19600
ASARCO Slag	HASP05-F9	9.4	1.27	145	<5	<1	206	113	280000	9510	68.6	55.0	<1	19.3	620	9.5	19000
*ASARCO Slag	HASP06-A0	9.3	1.89	150	<5	1.1	224	94.6	265000	9370	84	41.9	<1	17.9	561	5.7	18300
Mill Scale	HNUCOR01	10.3	35.9	32.0	<5	<1	45.6	784	515000	6160	13.4	10	<1	473	119	<5	184
*Mill Scale	HNUCOR02	9.7	37.5	31.3	<5	<1	45.4	837	532000	6210	15.5	9.8	<1	568	93	<5	150
Mill Scale	HNUCOR03	10.3	36.8	31.7	<5	<1	45.2	879	528000	6340	13.5	9.8	<1	575	118	<5	100
Ferrous Granules	HTECK01	9.0	2.09	374	<5	1.4	254	370	188000	6120	364	364	<1	62	519	5.7	17000
Ferrous Granules	HTECK02	8.9	1.29	486	<5	2.2	301	443	266000	7410	464	436	<1	79	581	5.7	18400
Ferrous Granules	HTECK03	9.1	1.76	670	<5	2.7	250	446	267000	7690	392	392	<1	51.2	608	6.0	18300
*Ferrous Granules	HTECK04	9.0	3.02	505	<5	3.6	262	451	274000	8030	879	300	<1	67.2	601	6.3	20000
Coke	HCONOCO01	7.9	24.3	<5	<5	<1	<5	<5	561	9.4	<5	<5	<1	107	<10	<5	6.4
Coke	HCONOCO02	7.8	16.6	<5	<5	<1	<5	<5	328	7.3	<5	<5	<1	105	<10	<5	9.3
*Coke	HCONOCO03	7.5	15.9	<5	<5	<1	<5	<5	152	<5	<5	<5	<1	108	<10	<5	<5
Coal	HBULLMO01	7.7	7.76	<5	<5	<1	<5	<5	544	16.7	<5	<5	<1	<5	<10	<5	6.5
Coal	HBULLMO02	7.6	7.51	<5	<5	<1	<5	8.4	1760	25.0	<5	<5	<1	<5	11	<5	11.9
*Coal	HBULLMO03	7.7	7.00	<5	<5	<1	<5	12.0	1400	25.4	<5	<5	<1	<5	13	<5	17.4
Coal	HSCREEK01	7.2	6.78	<5	<5	<1	<5	<5	1440	28.2	<5	<5	<1	<5	33	<5	15.1
Coal	HSCREEK02	7.7	9.58	<5	<5	<1	<5	<5	1340	16.8	5.2	<5	<1	<5	16	<5	9.2
*Coal	HSCREEK03	6.9	8.51	<5	<5	<1	<5	<5	2000	22.2	<5	<5	<1	<5	40	<5	11.4
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*=QA/QC Sample All units are mg/kg except for pH which is s.u. RL=Analyte reporting limit.

Montana Department of
ENVIRONMENTAL QUALITY
Judy Martz, Governor
P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.state.mt.us

MEMO TO FILE

Calendar Year 2002 – January through November 15 - Status Report on Malfunction Tracking for the Kiln and Clinker Cooler Stacks at the Holcim (US) Inc. Trident Cement Manufacturing Plant

Prepared by: John Raudsep, Air Quality Specialist, Permitting and Compliance Division, Montana Department of Environmental Quality (DEQ)

Date Prepared: November 19, 2002

Malfunction Tracking

The DEQ tracks all malfunction and excess emission events that result in emissions that exceed limitations placed on the facility by current permits. The facility is presently operating with Pre-construction permit number 0982-10 and Operating Permit number OP0982-00.

Malfunctions may cause one or more excess emissions events depending on the cause and length of the malfunction. A malfunction is the root cause of the upset and a new excess emission event is recorded each time the emissions go above a permit condition during that upset.

Malfunction tracking is done in six ways 1) the length of time excess emissions occur, 2) the length of time emissions are in excess of regulated opacity limits recorded as percentage of operational time, 3) the number of excess emission occurrences, 4) the number of malfunctions causing the excess emissions, 5) estimated particulate emissions resulting from emissions which are in excess of regulated opacity limits recorded as tons/year, and 6) by the type or cause of malfunctions.

The malfunction emission time tracking is accomplished much as it has been done in the past. The total time of the excess emission caused by the malfunction condition is recorded, totaled, and tracked in an attempt to identify and quantify problem areas. The number of malfunctions is tracked separately since one malfunction may cause more than one excess emission condition (i.e., one equipment failure may cause excess emissions at the time of failure, and again during shutdown/start-up for repairs. This would be recorded as one malfunction and three excess emission conditions).

The malfunction estimated emissions tracking is accomplished by using the malfunction emission time, estimated efficiencies of control equipment, and controlled plant emission rates. For this determination all malfunctions are considered to be of the control equipment type, and it is assumed that no control equipment is functioning. This is done by first determining the annual emissions (Tons/year) assuming the plant is operated for 8760 hours at a 100% production rate, and using actual emission rates determined from stack tests with the Electrostatic Precipitator

(ESP) and Clinker Cooler Baghouse running. These emission rates are then adjusted by an efficiency factor determined for the ESP and baghouse. Since no data is directly available (from before and after stack tests) to determine the efficiencies during an excess emission condition, they were determined using AP42 emission factors for controls on Cement Kilns (AP-42, 11.6, Table 11.6-2). The adjusted emission rates are then multiplied by the malfunction times to generate the estimated excess emissions in tons. Since malfunctions and excess emission conditions do not always cause the opacity to go to 100%, adjustments are made to the estimated tonnage in an attempt to better represent the overall emissions (Note: This correction is not done in determining the malfunction or excess emission time, since the time is a measure of how long the condition exceeded the permit condition).

It should be noted that the estimated uncontrolled emissions, as calculated, would more than likely be higher than actual uncontrolled emissions. This is based on the following assumptions:

1. The actual efficiency of the control units (ESP and baghouse) will more than likely be slightly lower than that estimated. The lower ESP efficiency would have the effect of lowering the estimated uncontrolled emissions during an excess emission event.
2. This method of determining uncontrolled emissions does not take into account the material that would "settle" out in the ESP and baghouse enclosures, even if the units were not running (drop out effect).
3. This method of determination assumes 100% production at all times, and does not allow for periods of lower production rates such as start-ups and shutdowns.
4. This method of determination assumes that the malfunction event occurs at the maximum reported opacity, and does not allow for periods of lower opacity during the event.

Malfunction/Excess Emission Data

Table 1 is a summary of the results for the kiln.

TABLE 1 – KILN ESP UNIT

YEAR	OPERATING HRS (KILN)	TOTAL TIME ESP OFF-LINE HRS Note 1	% EXCESS EMISSIONS (KILN)	PRIMARY CAUSE	ESTIMATED EMISSIONS AS A RESULT OF MALFUNCTIONS (TONS)
1998	7768.4	138.3	1.8	Ring	Note 2
1999	7897.4	82.5	1.0	Coal	Note 2
2000	8079.4	110.0	1.4	Ring	Note 2
2001	8100.6	119.9	1.5	Gas/Shutdown	25.6
2002 (January – November 15)	6675.2	440.5	5.5	Other (Equipment Malfunctions)	48.1

Note 1: The hours for 2002 were a result of 333 excess emission events, and a total of 133 malfunctions.

Note 2: Estimation of emissions (Tons/year) resulting from malfunctions not estimated for these years.

Table 2 is a summary of the results for the clinker cooler.

TABLE 2 – CLINKER COOLER BAGHOUSE (Note 1)

YEAR	OPERATING HRS	TOTAL TIME BAGHOUSE OFF-LINE HRS	% EXCESS EMISSIONS	PRIMARY CAUSE	ESTIMATED EMISSIONS AS A RESULT OF MALFUNCTIONS (TONS)
2000	8079.4	27.7	0.34	Ring	Note 2
2001	8100.6	30.6	0.38	Ring	7.7
2002 (January – November 15)	6675.2	36.2	0.45	Ring	7.0

Note 1: Tracking of malfunctions on the Clinker Cooler began in calendar year 2000. Data for 2000 was not complete.
Note 2: Estimation of emissions (Tons/year) resulting from malfunctions not estimated for this year.

Terms and Definitions: The following are terms used in the tracking of uncontrolled emissions from the cement kiln.

Malfunctions (Administrative Rules of Montana – 17.8.110, 9/30/96)
"Malfunction" means any sudden and unavoidable failure to operate in a normal manner by air pollution control equipment, process equipment, or a process that affects emissions. A failure caused entirely or in part by poor maintenance, careless operation, poor design, or any other preventable upset condition or preventable equipment breakdown is not a malfunction.
If a malfunction occurs and creates emissions in excess of any applicable emission limitation, the department may elect to take no enforcement action if: (a) the owner or operator of the source provided the notification required by this rule; (b) the malfunction did not interfere with the attainment and maintenance of any state or federal ambient air quality standard; and (c) the owner or operator of the source immediately took appropriate corrective measures.

Cement plants and more specifically kiln operations tend to have more malfunctions that result in excess emissions than other types of operations. This discussion of malfunctions at Holcim (US) relates primarily to situations that result in tripping of the Electrostatic Precipitator (ESP); i.e. ESP is temporarily off line. These malfunctions can be caused by a number of events, as listed below:

DEQ identified ESP malfunction and excess emission event causes include, but are not limited to:

1. Ring drop- A build up of kiln process material on the kiln wall gradually closing off the diameter of the kiln wall. When the built up material fall from the walls, it causes a further restriction to the diameter and airflows in the kiln. This can cause a shift in the CO and oxygen (O_2) ratio in the kiln and in the exhaust gas.
2. Fuel shifts- Sudden non-anticipated changes in the fuel makeup or quantity can upset the balance of CO & O_2 in the kiln.
3. Stoichiometric changes- A change in the amount of oxygen or in the CO / O_2 balance can cause an unfavorable shift in combustion gases.

4. Startup/shutdown- The kiln is in an unsteady state until equilibrium is reached.
5. CO or O_2 Analyzer problems- If either of the analyzers is functioning abnormally or improperly, the operator is unable to make the appropriate changes to keep the kiln stable because the exact kiln environment is not known. The facility has one of each type of analyzer.
6. Operator error
7. Equipment malfunctions - Failure of equipment or equipment components, which cause upset conditions in the plant.

Clinker Cooler Baghouse loss: The bypassing of the baghouse is a safety precaution to prevent more serious problems under upset conditions, such as a fire. A potentially flammable environment could result from elevated temperatures in the fabric bag area of the unit.

DEQ identified Clinker Cooler Baghouse causes include, but are not limited to:

1. Ring drop- A build up and sudden release of kiln process material on the kiln wall. This can cause a larger than normal flow of process material into the clinker cooler, elevating the temperatures. In addition, when the built up material fall from the walls, it causes a further restriction to the diameter and airflows in the kiln.
2. Fuel shifts- Sudden non-anticipated changes in the fuel makeup or quantity can upset the temperature balance in the kiln.
3. Grate – Excessive flow of product at end of the kiln overloads the grate and the cooling system for the clinker cooler. Ring drop is one example of a larger that normal flow of product out of the kiln.
4. Startup/shutdown- The kiln is in an unsteady state until equilibrium is reached.
5. Operator error

Current and recent plans

In development of the Compliance Monitoring Strategy by the EPA and the DEQ, an enforcement prioritization level of five percent (5%) control equipment downtime/excess emissions was used as a guideline for further review for many types of facilities, including cement plants. This level is not a limit and it has not been or should not be considered a compliance determination standard for non-compliance. Establishment of the 5% level does demonstrate a historical understanding that some level of excess emissions is expected from unanticipated conditions. However since percentages vary between industries and even between similar facilities, both the EPA and DEQ evaluate each excess emission event and each facility independently in determination of compliance.

Initial Evaluations and Corrections

Initial evaluations in 2000 and 2001 showed several areas that were identified as potential action items. For these areas, actions have been taken and results of the current analysis show that they have reduced the malfunction rate to the following areas:

1. The replacement of the analyzer – as indicated in the graphs "CY 2002 KILN ANALYZER MALFUNCTION ANALYSIS" and "HOURS OF EXCESS KILN EMISSIONS-BY TYPE", repairs and replacement of the analyzer has reduced the number and hours of excess emissions.

2. Replacement of the refractory brick in the kiln, or a portion of it, with a new type of "anti-coating" brick - as indicated in the graphs "CY 2002 KILN RING DROP MALFUNCTION ANALYSIS" and "HOURS OF EXCESS KILN EMISSIONS-BY TYPE", the number and duration of malfunctions associated with ring drop have been reduced.

On January 1, 2002, Holcim (US) changed their maintenance performance and tracking system to a newer more appropriate system. Since that change occurred, the DEQ has seen a decrease in the number of malfunctions and excess emission events associated with equipment problems, which may or may not be attributed to the new system. A review of the new system also showed better control and tracking of equipment preventative maintenance practices and in the identification, repair, and tracking of equipment problems. The DEQ will continue to evaluate the new system and evaluate its effects on malfunctions and excess emission events at the facility.

Current Year Data Analysis

For the current year (2002), the duration and number of excess emission events has increased; however, the number of malfunctions has gone down. The DEQ believes this is due to the number of major equipment malfunctions that occurred during 2002. In previous years the malfunctions that occurred were more of an individual process related event occurrence type (high CO or low O_2 in the ESP, Ring drops or pushes, analyzer malfunctions, etc.), while in 2002 a large portion of the occurrences were a result of major process equipment failures. Unlike the individual event items, the major equipment failures might lead to several excess emission event conditions, over a longer malfunction time period. The DEQ anticipates that the new maintenance program will continue to reduce these types of malfunctions; however, it is also understood that this type of malfunction will more than likely never be totally eliminated. The DEQ will continue to track and evaluate this type of events and take action if it is determined to be appropriate. A list of the major equipment failures reported in 2002 is presented below along with an analysis for each.

1) ID Fan Variable Speed Drive failure (this results in a failure of the Kiln ID Fan) A failure of the Kiln ID fan results in the Kiln and associated equipment being shutdown. The failure, and subsequent shutdown and start-up cause multiple excess emission events. Initial attempts by the facility were to repair the faulty components of the equipment; however, it was determined that repairs of the faulty components only prolonged the problem and the parts were replaced. Since the repairs and replacement has occurred the number of malfunctions due to this problem have dropped to zero. Malfunctions – 5, Excess Emission Events – 11, Hours – 47.3 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN ID FAN MALFUNCTION ANALYSIS"
2) Kiln Feed Pump – The Kiln Feed Pump failure results in the Kiln and associated equipment being shutdown. The controller for the pump was replaced, and since the repairs and replacement occurred the number of malfunctions due to this problem have dropped to zero. Malfunctions – 1, Excess Emission Events – 1, Hours – 0.1 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN FEED PUMP MALFUNCTION ANALYSIS"

3) Kiln Burner Pipe - This failure results when the refractory brick protecting the burner pipe cracks and falls off, allowing the extreme heat in the kiln to damage the burner pipe. A Kiln Burner Pipe failure results in the Kiln and associated equipment being shutdown. The failure, and subsequent shutdown and start-up cause multiple excess emission events. The burn tube was replaced and following a short period for adjustment, the number of malfunctions due to this problem has dropped to zero. Malfunctions – 2, Excess Emission Events – 7, Hours – 19.1 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN BURNER PIPE MALFUNCTION ANALYSIS"

4) Kiln Fuel Supply System Air Line Freezing - During the winter of 2001-2002 pneumatic air lines associated with the fuel supply system froze causing coke blockage and a malfunction in coke supply system. The lines were heat taped and alcohol was added to the system, the number of malfunctions due to this problem has dropped to zero. Malfunctions – 2, Excess Emission Events – 7, Hours – 0.6 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN FREEZE MALFUNCTION ANALYSIS"

5) Kiln ESP Major Equipment Repair - Periodic or routine repairs to the ESP are required; however, during 2002 several repairs were required which are not of a routine or periodic nature. These repairs included items such as repair of a broken grid rapper, repair of mechanical linkage which had caused a electrical short on the grid, and failure of a dumping valve, all of which required shutdown, cool down, and start-up to effect repairs. Malfunctions – 6, Excess Emission Events – 13, Hours – 13.8 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN MAJOR ESP MALFUNCTION ANALYSIS"

6) Kiln Main Drive Failure - A Kiln Main Drive causes the rotation of the kiln to stop, which results in the Kiln and associated equipment being shutdown. The failure, and subsequent shutdown and start-up, causes multiple excess emission events. Initial attempts by the facility were to repair the faulty components of the equipment; however, it was determined that repairs of the faulty components only prolonged the problem and the parts were replaced. Since the initial repairs and replacement has occurred the number of malfunctions due to this problem have decreased, and the facility is continuing to trouble shoot and correct remaining the problems. Malfunctions – 4, Excess Emission Events – 34, Hours – 31 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN DRIVE MALFUNCTION ANALYSIS"

7) Kiln Coal Mill Failure - A Kiln Coal Mill Kiln Drive failure results in the Kiln and associated equipment being shutdown. The failure, and subsequent shutdown and start-up, causes multiple excess emission events. The equipment was repaired, the number of malfunctions due to this problem have decreased. Malfunctions – 4, Excess Emission Events – 22, Hours – 24.5 – See Graphs "CY 2002 MALFUNCTION ANALYSIS" and "CY 2002 KILN COAL MILL MALFUNCTION ANALYSIS"

In addition to the major equipment failures identified and analyzed above, two other malfunction categories were analyzed in detail.

1) Excess emission events during operation under the Alternative Operating Scenario (using recycled glass as a feed material to the Kiln) – During this operation the opacity limit is reduced from 20% to 10%. A review of the excess emission events that were grater than 10%, but were 20% or less, was conducted. This review showed that there were 22 malfunction events. The 22 events lead to 62 excess emission events for a total of 140.3 hours. These malfunctions and excess emission events could be eliminated by the company should they elect to quit using recycled glass; however, this would impact the market for recycled glass and could be a detriment to recycling in the state.
2) Electrical Power Outage – One electrical power outage occurred in August that was serious enough to cause the facility to shutdown. The shutdown and resulting start-up caused a total of three excess emission events that lasted for a period of 10 hours.

In evaluating the malfunctions during CY 2002, it was determined that due to major equipment failures (Malfunctions – 26, Excess Emission Events – 105, Hours – 178.9), operations under the alternative operating scenario (Malfunctions – 22, Excess Emission Events – 62, Hours – 104.3), and an electrical outage (Malfunctions – 1, Excess Emission Events – 3, Hours – 10) contributed to a total 49 malfunctions and 170 excess emission events for a total of 293.2 hours. The remaining malfunctions, excessive emission events, and hours (84 malfunctions, 164 events, and 147.8 hours) represent a 1.83% Excessive Emission (EE) rate (see "EXCESS KILN EMISSIONS"). Of the remaining hours associated with malfunctions 51% are due to the coal and coke fuel feed systems.

Future plans

The DEQ will continue to track, evaluate, and work with Holcim (US) to reduce the amount of time the facility has uncontrolled emissions. The review will continue to be on a case-by-case basis in an attempt to determine trends that may require modification or correction.

One specific area that will be evaluated is the coke and coal feed systems. In addition, the DEQ will continue to track the maintenance plan and it's effectiveness on the reduction of malfunctions associated with equipment failures.

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April 29, 2005

Iver Johnson
Solid and Hazardous Waste Specialist
Waste and Underground Tank Management Bureau
Permitting and Compliance Division
Montana Department of Environmental Quality
Box 200901
Helena, MT 59620-0901

VIA EMAIL and US MAIL

Dear Iver Johnson:

Re: Draft Field Sampling Plan for Holcim (US) Inc. – Trident Facility Iron Source Piles and Fuel Source Piles

Holcim (US) Inc. has received and reviewed the *Draft Field Sampling Plan for Holcim (US) Inc. Trident Facility – Iron Source Piles and Fuel Source Piles*. We appreciate this opportunity to provide comments on that plan to the Montana Department of Environmental Quality (MDEQ). We offer these comments as a means to make this sampling as informative and useful as possible.

Page 1, paragraph 2:

Holcim appreciates that this sampling and analysis is being conducted to address questions that have been asked by members of the public. However, Holcim disagrees with the suggestion that the analysis of these samples is relevant to "the permit decision on Holcim's proposed project". Holcim is not aware of a legal basis that would suggest that the results of the sampling have a bearing on the TDF project. The fuels and raw materials to be sampled are in current use, and either are permitted already (i.e., coke and coal) or do not require permitting (i.e., slag, iron sources). Holcim does not object to MDEQ's referencing this information as part of its over-all EIS look at the plant or as a means to address public concerns, but Holcim does not agree that the information is relevant to the TDF permit. Please correct or delete that reference.

Additionally, Holcim disagrees with the reference to using the analysis of the iron sources to determine applicability of MCA 75-2-215. After careful review of the regulations, Holcim maintains that the make-up of the iron sources is irrelevant to the legal issues that underlie application of the incinerator rule (i.e., the slag use is not "primarily" disposal and is not "combustion.") We acknowledge that MDEQ is still reviewing the legal issue, but the composition of the slag is not itself relevant, either legally or practically, to application of Section 75-2-215.

As MDEQ is aware, combustion chemistry within the kiln is highly complex. Most material inputs to the kiln are incorporated in the end products. The percentage of material that exits the process via the stack is very small in comparison and cannot be projected based solely on measuring selected kiln inputs. Holcim has provided MDEQ with kiln emissions data for two tests with iron ore used in the

process and one test with an iron product used in the process. That data may be helpful in directly addressing questions about slag usage.

Page 2, paragraph 2 and pages 12 and 13:

Holcim understands that EPA developed the Toxic Characteristic Leaching Procedure (TCLP) to determine the toxicity of a waste by simulating the leaching process that a waste would undergo if it were disposed in a sanitary landfill. The materials to be sampled are temporarily staged at the site prior to their use in the cement-making process but Holcim does not intend to landfill any of those materials. Considering that MDEQ will be analyzing the samples for total metals, Holcim suggests that conducting a TCLP on the materials may not be useful and could be misleading. Application of the TCLP to the fuels would be particularly inappropriate.

Additionally, Holcim suggests that it may be more appropriate to sample (the fuels in particular) for Btu content rather than for volatile and semi-volatile organic compounds content. Sampling for heat content may better facilitate a general understanding of the role that each material serves in the cement-making process.

Page 2 and page 12:

Holcim objects to MDEQ's providing a 1/3 split sample to a third party that is not a governmental agency. The private advocacy group that MDEQ referenced does not have legal standing to participate in this process. That private group (like other members of the public) is entitled to review the public records of the file, presumably including information gathered by MDEQ and the analysis conducted by MDEQ.

Holcim is concerned that handling by a third party, not subject to any quality assurance or control, would be misleading if not subject to abuse. Holcim is unaware of MDEQ having provided sampled materials to the general public in the past, and believes that doing so would set an inappropriate precedent. Holcim requests that sample splits be limited to Holcim and authorized governmental agencies. If MDEQ is of a different view, Holcim respectfully requests that MDEQ provide legal justification for supplying the samples to third parties or the public at large.

Page 3, Section 2.0:

MDEQ may wish to note that the Holcim safety program is governed by the regulations of the Mine Safety and Health Administration (MSHA). In an effort to ensure the safety of the MDEQ personnel, they will undergo site-specific training provided by Holcim personnel prior to conducting the sampling campaign and will be accompanied by Holcim personnel while at the facility.

Page 3, Section 2.1, second paragraph:

MDEQ may wish to change the reference to "Holcim's slag pile" to "Holcim's material piles."

Page 12, Section 4.4:

Holcim requests that MDEQ return any excess source sample material to its original pile or simply return the material to a Holcim representative.

General comments on the plan:

First, MDEQ should note that the electronic copy of the document provided for our review, did not include the photographs. As a result, Holcim is unable to confirm correct labeling of the piles.

Second, Holcim requests that MDEQ remove all commercial names from the plan. Sharing the specific names of the suppliers and vendors with the public and with Holcim's competition is unnecessary. Holcim suggests that MDEQ refer to the sources as iron source A, B, and C; coal sources as X and Y, and the coke source generically.

Third, Holcim requests that MDEQ provide us with copies of all photos, field notes, and analyses made by MDEQ as soon as available. Holcim requests that MDEQ agree in writing to providing that information and suggests that it is included into the sampling plan.

Thank you again for the opportunity to provide comments on the draft sampling plan. We appreciate MDEQ's desire to do a demonstrably thorough job meeting commitments that have been made to the public. We offer these comments to facilitate your effort to address any public concerns.

We hope that our continued cooperation will assist with prompt resolution of the questions asked and allow us to move forward on this issue, as well as on the EIS. If you have any questions or require additional information, please contact me at 406.285.4977. I will be pleased to assist you.

Sincerely,
Holcim (US) Inc. – Trident Plant

Heidy Bruner
Environmental Manager

Cc: Ralf Osswald, Holcim (US) Inc. Vice President, Manufacturing, Mountain Region
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